REMARKS

I. GENERAL

Claims 1-19, 33, and 49-52 are pending in this application. Claims 1, 17, and 33 have been amended. Claims 1-19, 33, and 49-52 stand rejected in the Current Action as follows::

- Claims 1-2, 6-12, 15-18, and 49-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Zank et al. (US 6,307,955) (hereinafter "Zank");

- Claims 3-4, 17-19, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Suchard et al. (US 6,985,610) (hereinafter "Suchard");

- Claims 5, 9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Schindler et al. (US 6,516,467) (hereinafter "Schindler"); and

- Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Suchard, further in view of Schindler.

In response, Applicant respectfully traverses the outstanding claim rejections and requests reconsideration and withdrawal in light of the remarks presented herein.

II. REJECTIONS UNDER 35 U.S.C. § 102; ZANK

Claims 1-2, 6-12, 15-18, and 49-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Zank. It is well settled that to anticipate a claim, the reference must teach every element of the claim. *See* M.P.E.P. § 2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, "[t]he elements must be arranged as required by the claim." *See* M.P.E.P. § 2131; *citing In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Furthermore, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *See* M.P.E.P. § 2131; *citing Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913 (Fed. Cir. 1989).

Observations on Zank

The Zank citation described a system that receives the standard signature of a user, using equipment such as a graphic tablet digitiser and pen. Such a system is considered in the application to be part of the state of the art, and has significant drawbacks. For example, referring to paragraph [0005] of the current specification, obtaining the signature of a user requires the use of specialist equipment such as a graphics tablet digitiser and pen. In addition, this method of verification is not foolproof as when the signature is created, it can be easily viewed and replicated by an impersonator. A further problem is that use of a users standard signature increases the chance of interception and forgery – a person's signature tends to remain the same their whole life and so there is a large window of opportunity for anyone wanting to try to forge the signature.

The present invention gets around these problems. Firstly, specialist equipment such as a graphics tablet digitiser and pen are not required, because the signature being provided by a user is not their standard signature and so can be created using standard computer terminal equipment – e.g. solely by using a standard pointing device such as a mouse.

Secondly, as the signature is not a user's 'standard' signature, this does away with the problem associated with increasing the chance of forgery. The unique user signature created is created with reference to a background image. As such, the background image serves as a memory aid for the user wanting to resubmit their signature during an authentication test.

Thirdly, the movements made with the pointing device do not need to leave a visible trail – as would be the case with emulating a signature using a graphics tablet and pen. Therefore the signature is not visible after creation, and so cannot be viewed by a potential forger.

Failure to Satisfy Every Claim Limitation (Independent Claims)

<u>Discussion of Claim Amendments</u>

Referring to section 2 of the Office Action, the Examiner "interprets that the surface of graphic tablet digitiser 24 in Figure 1 [of Zank] refers to background". However, referring to the newly amended claim 1, the feature of a background image has been clarified to further distinguish it from Zank. In particular, the background image is now recited to provide a user with visual reference points to help the user to remember and create their signature. Support for this amendment can be found in the specification at, e.g., paragraph [0073].

While the original submission stands that Zank does not have the feature of a background image, it is also further submitted that it would be impossible for Zank to have the feature of a background image that provides a user with visual reference points to help the user to remember and create their signature.

In Zank, both the physical equipment (i.e. the digital tablet) and the on-screen representation of the input (see Figure 4) have "backgrounds" that are necessarily blank. This is because a user needing to provide their standard signature needs to have a blank background to write their signature on. If the background is not blank, then the user may not be able to sign their standard signature properly as the background image artifacts would distract the user and interfere with the signature process.

In contrast, the present invention uses a background image as an important visual indication as to what a user's PD signature is and rather than interfering with the creation of the PD signature, plays an important part in creating it, and replicating it time and again. In particular, the visual reference points are cues as to where the pointing device is to be placed, and how it is to be moved.

It should be appreciated by the Examiner that a PD signature is not the same as a standard signature. A standard signature, as mentioned, is memorized by a user and used usually for their

entire lifetime. It is created by the user practicing their signature using a pen on paper. As such, the signature shape and dynamics are defined by the fine motor skills of a particular user, and so is unique to that user, and so can be used to verify the identify of a user. Such a signature cannot be created by a pointing device (PD), as a pointing device relies on a user's gross motor skills. As mentioned in paragraph [0005] of the present application, attempts by users to provide repeatable signatures using a mouse or similar pointing device have been unsuccessful. This is associated with the fact that a pointing device cannot be controlled as finely as a pen to generate the same signature repeatedly.

However, the unique solution of the present invention is to provide a background image with reference points to provide visual cues as to where a pointing device is to be positioned and how it is to be operated. This way, not only does the invention use biometrics (i.e. sensing information about the user) to authenticate a valid user as is the case with a standard signature, but also elicits information from a user that is secret to others (i.e. knowing exactly where to click, drag or otherwise operate the pointing device relative to a background picture).

Therefore, not only can the present invention be used to successfully authenticate a user without the use of specialist equipment (such as a digital tablet and pen) – but also provides a more secure method due to the combined use of both biometrics and a user-specific secret. In contrast, Zank's standard signature capture method can be easily forged.

A further advantage flows from the fact that a PD signature is generated with reference to a background image - a different PD signature can be used for each different image. This is due to each background image having a different arrangement of visual reference points.

Lastly, as mentioned, the PD signature created does not need to be visible, and so an onlooker cannot determine the nature of the signature as easily as they would do with a standard signature input system such as that described in Zank. The ability to make the signature invisible is a result of the background image. The user is provided with instant feedback as to the exact position of the cursor relative to the background image. In contrast, in Zank, a standard

signature must be created in one movement, without reference or feedback, and so cannot be created using a pointing device.

Independent claims 17 and 33 have been amended to incorporate the same clarifying feature as claim 1, and so the above arguments apply to these independent claims.

Discussion of Applicant's Previous Arguments

The previously submitted arguments are maintained, and the Examiner's submissions are respectfully contested. In particular:

Claim 1 recites "receiving a sampled pointing device (PD) signature." In the current application a PD signature is described as being created when a "user draws lines and drags (repositions) and/or clicks on icons positioned on a background." See current application, paragraph [0012]. As such, the recited PD signature requires dragging and/or clicking on icons positioned on a background (see above arguments).

In contrast, Zank fails to disclose an icon positioned on a background, much less dragging and/or clicking an icon to create a signature. Zank's signature includes "pen position coordinates such as x-, y-, and z-axis data." See Zank at col. 5 lines 28-32. Clearly, the notion of icons are wholly absent from Zank's signature.

Claim 1 also recites "providing data for positioning at least one object on said background image." As best understood, the Examiner points to Zank's description of a stylus being used to input a written signature on a tablet to satisfy this limitation. See Current Action, pg. 3. However, simply writing a signature cannot reasonably be construed as an "object," in the context of the claim.

In particular, the step of positioning at least one object takes place before receiving a signature, and so this means that the "object" in Zank cannot be interpreted to be a signature. Similarly, claim 17 recites the feature of "displaying an object map to a user". The Examiner has

equated "objects" as signatures (Fig 4, 25A, 25B) – however the signature as presently claimed is captured after the objects are displayed.

Claim 17, recites "to reposition or click on one or more icon positioned on a background." Claim 33, as amended, recites a similar limitation. Applicant points out that the Examiner's proposed combination fails to satisfy this limitation. That is, Zank's signature simply includes "pen position coordinates such as x-, y-, and z-axis data." See Zank at col. 5 lines 28-32. In no event does Zank describe manipulating icons positioned on a background to generate a PD signature, as set forth in the claims. Clearly, the notion of icons are wholly absent from Zank's signature.

Failure to Satisfy Every Claim Limitation (Dependent Claims)

Each of the dependent claims inherit every limitation of the claims from which they depend. As shown above, Zank fails to satisfy every limitation of the independent claims. As such, the dependent claims are patentable at least for the reasons set forth above with respect to the independent claims.

III.   REJECTIONS UNDER 35 U.S.C. § 103

Improper Combination (No Motivation)

The determination of obviousness must consider, *inter alia*, whether a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and whether there would have been a reasonable expectation of success in doing so. *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.,* 229 F.3d 1120, 1124, 56 USPQ2d 1456, 1458-59 (Fed. Cir. 2000); *Medichem S.A. v. Rolabo S.L.,* 437 F.3d 1157, 1164, 77 USPQ2d 1865, 1869 (Fed. Cir. 2006). Where the teachings of two or more prior art references conflict, the Examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young,* 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). If the proposed modification would render the prior art invention being modified unsatisfactory for its

intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

In view of the above, Applicant respectfully points out that modifying Zank in view of Schindler and/or Suchard is improper under 35 U.S.C. 103. At the foot of page 3 of the Office Action, the Examiner has recently cited prior art Suchard et el. However, Suchard et al. does not disclose the notion of icons. Even if the notion of icons were disclosed, then, as previously stated, these cannot be incorporated into the signing process described in Zank as Zank is wholly incompatible with the notion of using anything but a blank signing surface on which to input a standard signature. As stated above, this is because to provide icons, and/or a background image, would interfere with the signature capture process that Zank describes.

Similarly, Zank and Schindler are incompatible (see pages 4 and 5 of the Office Action). While draggable icons in themselves are known in the art (as described by Schindler), placing them in combination with Zank works completely against the signature capture system described in Zank.

Failure to Satisfy Every Claim Limitation

Claims 3-4, 17-19, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Suchard; claims 5, 9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Schindler; and claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zank in view of Suchard, further in view of Schindler. As shown above, Zank fails to satisfy every limitation of the independent claims. Also, the additional references relied upon by Examiner fail to satisfy the missing limitation discussed above. As such, each of the dependent claims are patentable at least for the reasons set forth above. Moreover, the dependent claims set forth additional features making them patentable in their own right.

For example, claim 3 recites "wherein operating said PD [to provide data relative to said background image] includes moving a mouse." In the Current Action, the Examiner newly cites Suchard et al. as teaching control of a PD to provide a signature and together in combination

with Zank results in the features of claim 2. This assertion is respectfully contested. Suchard is incompatible with Zank as Zank already has a signature input means fulfilled by a stylus. A person skilled in the art would have no motivation to replace the stylus of Zank with a mouse as Zank specifically teaches that a stylus is used for this purpose. Zank features a mouse, but this is used to move pointer 72 about elements of the respective signatures and indicating acceptance or rejection of a previously input signature. See, e.g., Zank at col. 7 lines 12-19. Similar arguments apply in respect of claims 4, 17, 18 and 33.

Claim 9 recites "wherein displaying said background image includes displaying a graphic." The Examiner points to the combination of Zank and Schindler as Schindler teaches displaying a graphic as a background image. However, as argued above, the provision of a graphic as a background image would interfere with the provision of a standard signature, as required by Zank, and so there would be no teaching, suggestion or motivation to incorporate the graphic described in Schindler as a background image in Zank. Moreover, as known in the art, pen tablets typically do not provide graphics, but instead provide blank screens for accepting written signatures. In any event, as noted above, a pen tablet cannot reasonably be construed as a "background image" in the context of the claim. Similar arguments extend to other claims, in particular claim 52.

IV.   CONCLUSION

In view of the above, Applicant believes the pending application is in condition for allowance. Applicant believes no fee is due with this response. However, if a fee is due, please charge any fees required or credit any overpayment to Deposit Account No. 06-2380 under Order No. 60167/WO-697003CON, during the pendency of this Application pursuant to 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

Dated: September 25, 2009

Respectfully submitted,

By _____
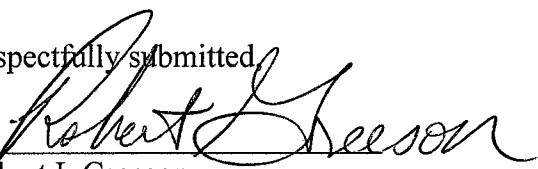
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